



Application Number 10/823,847

Claim listing:

Claim 1 (currently amended)

Claim 2 (canceled)

Claim number 1 (Currently amended): (Mike 8001 induction motor design)

~~What I claim as my invention is the repositioned dome of a hermetic (or semi-hermetic) refrigeration (or a/c) system as shown in FIG. 4, 4-1 (the dome is shown with heavy line, dashed or solid). The original dome is repositioned inside the motor to leave the stator electrical winding and stator and most part of stator pole outside the dome, seals the rest small part of stator pole along with rotor assembly and compressor, refrigerant inside the dome as shown in FIG. 4 (mike 8001 induction motor design, the dome is shown with heavy line, dashed or solid), FIG. 4-1 (enlarged part of FIG. 4, the dome is shown with heavy solid or heavy dashed), FIG. 4-2 (enlarged part of FIG. 4-1), FIG. 4-3 (enlarged part of FIG. 4-1), FIG. 4-4 (cross section view of FIG. 4-3), FIG. 4-5 (mike 8001 design shown with electric winding), FIG. 4-6 (cross section view of FIG. 4-5), FIG. 4-7 (mike 8001-1 induction motor design with the edge of the stator pole is in the same plane as the inside surface of the dome), FIG. 4-8 (cross section view of FIG. 4-7). Compare the original dome as shown in FIG. 3 to the repositioned dome as shown in FIG. 4. The stator poles go through the dome to face rotor directly. There is nothing between the stator pole and rotor. The distance between the motor stator and rotor will be the same as that in a traditional motor so motor efficiency will not be reduced. There is no electric~~

~~wire entrance of the dome because the electric winding has been left outside the dome. The dome is completely sealed and gets no chance to cause leaking. The --- gaps between laminated stator pieces should be sealed to prevent refrigerant - leaking. The material of the part of dome, that is surrounding the rotor assembly- (FIG. 4-1), should be nonmagnetic (or diamagnetic) material so it will not interfere with stator magnetic field. The new positioned dome design also separate refrigerant from electric winding to prevent the refrigerant getting - burned by the short circuit of the winding.-~~

What I claim as my invention is shown as Fig. 4 (Mike 8001 induction motor design), a new structure of the hermetic (or semi hermetic) refrigeration (or a/c) system. In this new design the motor stator electrical winding and the stator body are left outside the dome. Rotor and compressor stay inside the dome; stator poles go through the dome to face the rotor directly (as shown in FIG.4-5). The distance between stator pole and rotor is the same as before, motor efficiency is the same as before. Those connections between dome and stator poles are sealed; most likely they are welded together. The material of the part of the dome, where the dome gets stator poles go through, should be nonmagnetic (or diamagnetic) material; so the magnetic flux pattern in the stator will stay the same, motor will function the same as before. The gaps between the stator laminated pieces should be sealed to prevent the leak of the high pressure refrigerant. This new design makes the dome a completely sealed space, no opening for electrical entrance, no possibility to leak refrigerant, no possibility to cause environmental pollution. The short circuit of the stator electrical winding

will not burn the refrigerant. The troublesome stator electrical winding has been left outside the dome so we also can increase the system safety, durability, and reliability.

Claim 2 (canceled): (Mike 8002 stator design)